Willamette Action Team for Ecosystem Restoration (WATER)
Steering Team Meeting
September 8, 2016

http://www.nwd-wc.usace.army.mil/tmt/documents/FPOM/2010/Willamette_Coordination/Steering_team/WST.html

Facilitator's Summary

ACTION	RESPONSIBLE PARTY	BY WHEN?
Provide possible dates for Managers' Forum to DSC; DSC will then schedule meeting	Jason, Joyce, Marc, DSC	ASAP
Review and provide additional edits to the 8/11 summary to Emily	ALL	September 12th
Provide FY17 budget to Emily to send to Steering Team	Ian	September 12th
Provide Steering Team's list of elevation process and criteria to the RM&E team for information and feedback.	DSC	September 22nd
Provide design project review timeline to G4 and Steering Team	Ian	9/28 & 10/1
Discuss ways to include NPCC as a member in the WATER process – check in with Jane on progress	Marc	October meeting
Follow up with USFWS re: attending Steering Team meetings.	Ian &Dan	October meeting
Coordinate BPA representative to discuss funding options at next Steering Team meeting	Dan	October meeting
Send survey to determine topic for regional workshop	DSC	TBD

In the room: Ian Chane (USACE), Joyce Casey (USACE), Marc Liverman (NMFS), Dan Spear (BPA), Karl Weist (NPCC);

Participants on the Phone: Bernadette Graham-Hudson (ODFW), Nancy Gramlich (ODEQ), Lawrence Schwabe (Grand Ronde), Jason Sweet (BPA);

Facilitation Team: Donna Silverberg & Emily Plummer**,** DS Consulting

Welcome and Review of Meeting Summary
Emily Plummer, DS Consulting, welcomed the group and explained that the purpose of the day's session is to update the group on progress made by WATER teams and to work towards regional alignment on the Middle Fork RM&E plan.

Follow-up from 8/11 Meeting
The group discussed the August 11th Facilitator's Summary; Emily noted that there were very few edits provided and the group asked for more time to review the summary. Bernadette Graham-Hudson, ODFW, suggested that the section regarding RPA 1 is reviewed to make sure that it is accurate. Additionally, it was pointed out that the action item on pg. 6 needs to clarify that the Steering Team is going to discuss when to share the Lookout Point plan with the RM&E Team.

→ **ACTION:** The group will review the August 11th summary and provide any additional edits to Emily (emily@dsconsult.co) by Monday, September 12th.

The group reviewed the list of action items noted in the August 11th summary and provided status updates:

- Ian Chane and Tammy Macke, COE, successfully created a webpage to house Steering Team meeting materials, including agendas, summaries and other materials. If there are additional documents that the group would like to see posted, they can contact Ian. Nancy Gramlich, ODEQ, suggested posting the Configuration/Operation Plan (COP); the group agreed and Ian will post it.
    - → **ACTION:** Ian will post the COP to the new Steering Team website. If there are additional materials that you would like to have posted, contact Ian.
- In regards to exploring ways to include NPCC as a member in the WATER process, Ian Chane reached out to Gail Lear, COE, to let her know that Jane Hannuksela, NMFS, will be contacting her. Marc Liverman, NMFS, will reach out to Jane to check in on any progress and report back at the October meeting.
    - → **ACTION:** Marc will contact Jane to check in on progress regarding NPCC membership.
- Ian and Dan Spear, BPA, did not have a chance to reach out to USFWS regarding their participation in the Steering Team; however, they will do so for the October meeting.
    - → **ACTION:** Ian and Dan will contact Rollie White, USFWS, in regards to a FWS representative for the Steering Team.
- DSC decided to wait to schedule a workshop for October until more information is available on the scope and participation of the workshop.
- DSC plans to provide the Steering Teams' elevation process ideas to the RM&E team at their September 22nd meeting.

The group provided updates from other WATER Teams and the G4:

RM&E Team 8/25 meeting update: The RM&E Team met on August 25th for a full-day session during which Ian provided more information on the policy guidance for how CRFM funds can be used. They also continued to develop common definitions of different types of monitoring and discussed and refined their project/objective prioritization process. The next RM&E meeting is on September 22nd.

G4 8/31meeting update: The G4 met on August 31st; the meeting included representatives from BPA, COE, and NMFS, however, did not have anyone present from FWS. The team hopes to include FWS in the next meeting. During their session, the G4 discussed the Middle Fork Sub-Basin plan (the concepts from their discussion are captured in the summary provided for this session and attached), and the next Managers' Forum meeting that will be scheduled for November. They thought that the November Managers' Forum should include the same managers that participated in the July meeting, however, there may be a need for a Federal-Family managers' meeting prior to the full forum. The next G4 meeting is on September 28th.

Upcoming November Managers' Forum meeting: The Steering Team hopes to be able to present the Middle Fork Sub-Basin Plan to the managers for input at their November meeting. BPA, COE, NMFS, and DSC will work to schedule the Managers' meeting.

→ **ACTION:** Jason, Joyce and Marc will provide to DSC any potential dates that their managers are available in November. DSC will then send the regional managers a Doodle poll to schedule the November meeting.

FY 2017 Program and Budget Update
Ian provided additional WATER program updates to the Steering Team:

Willamette Fish Facility Design Working Group: The WFFDWG will meet next week. They are working on developing a workshop for Cougar which may be before October 4th. *[Facilitator's Note: It*

was clarified in edits that this meeting was cancelled. Also, when the group name was changed from the Fish Passage Team, they agreed to be called the WFFDWG (pronounced wuff-dog).]

Willamette Fish Passage Operations and Maintenance: WFPOM will meet on September 28th to review the Willamette Fish Operations Plan (WFOP). The group is trying to wrap up the WFOP before fish passage season; comments are due to the COE by the end of December.

Flow Management Team: The Flow Management Team will meet on September 20th. Flows are looking better this year than last, however, the team is hoping for rain!

Hatchery Management Team: The Hatchery Management Team will meet on September 21st. They are looking into attraction issues at the Foster adult trap and are currently assessing temperature differentials to see if that is contributing to the attraction issue. [*Facilitator's Note: It was clarified in edits that this meeting was cancelled.]*

So far this year, 199 unmarked Chinook have been detected at Cougar. All of the fish have been recycled; a total of 40 wild fish were placed upstream of Cougar. Falls Creek returns are average for this time of year, with a total of 387 wild returns. Also, the juveniles from McKenzie Hatchery were moved to Leaburg Hatchery during the Cogswell Creek pipeline work at McKenzie Hatchery. They were then moved back once construction was complete.

Ian provided a Fiscal Year 2017 Budget update to the Steering Team. He noted that the budget is not likely to be distributed in October; instead, they are anticipating that it will be provided as late as March and that they will be working under a Continuing Resolution. He shared that there is just over $22.6 million allocated for the Willamette for FY 2017. Additionally, Ian pointed out that there will be a lot of engineering plans and specs review required in FY17, which equates to a lot of review work for the region. Joyce noted that in the past there has been concern expressed over quick review time, she suggested that the group discuss how to work together this year to ensure that everyone is aware of the needs and timeframes so that they can use this as an opportunity to strengthen trust and transparency. She suggested that Ian provide a draft timeline of when products will likely be available for review for the G4's September 28th meeting. The G4 can then discuss ideas on how to move forward. The timeline will also be provided to the Steering Team by October 1st. The group agreed to this next step.

→ **ACTION:** Ian will develop a draft timeline of when products can be expected to be ready for review and the timeframe for decisions on the products. He will provide this to the G4 for their September 28th discussion and then to the Steering team by October 1st.

Ian noted that there will be a tight review timeline for the Foster project. Bernadette requested a timeline for Foster sooner than later. Ian also noted that the timeline will be subject to change and so he will plan on updating it throughout the year.

Additionally, Joyce and Ian noted that the COE will begin steps towards conducting a National Environmental Policy Act (NEPA) planning process on the Willamette in FY17 and that a mix of CRFM and O&M funds will be used to fund that effort. The COE is currently working under a 1980 Environmental Impact Statement (EIS) on the Willamette. This process will be a long-term process, likely 2017-2022, and will not overlap with the Columbia River NEPA process, as the COE is managing the two EIS' separately.

Ian walked the group through the FY17 Budget, detailing the projects and funding allocations. He will provide the list to Emily to send to the Steering Team with the meeting summary.

→ **ACTION:** Ian will send the CRFM Budget to Emily to pass along to the Steering Team.

Discussion on Middle Fork RM&E Plan
The Steering Team reviewed the *Middle Fork Willamette Subbasin Research, Monitoring, and Evaluation Plan – Summary for WATER Discussion – 9-8-16* (attached below). They noted that the purpose of the discussion is to get the Steering Team on the same page in regards to the plan so that it can be provided to the RM&E Team and Managers' Forum for review and input. The group discussed the intention of the plan and agreed that it should clearly signal what information is needed in order to inform the Managers' 2019 check-in and 2021 decisions around downstream passage feasibility in the Middle Fork Willamette. At this point, the plan is for conversation purposes to make sure that, in 2021, the Managers will have the information that they need to make decisions.

The group noted that in 2019 there will be a process check-in on the COP assumptions and to make sure that things are lining up for a 2021 decision. In 2021, the Managers will consider the technical feasibility, biological benefit, and the cost effectiveness of downstream passage in the Middle Fork, specifically at Lookout Point. The information needs, plan and sequence of the objectives need to be determined now so that, in 2019, Managers have the necessary information to determine if a self-sustaining salmonid population is feasible. If the research shows that fish can migrate down and upstream, and reproduce and maintain the lifecycle, the project can then be sent to engineering for development of design alternatives.

It was noted that the Steering Team needs to make sure that the Middle Fork RME Plan summary includes the information that the Managers' need in order to provide input about whether they are on the right track. It also needs to clarify management direction for the RM&E team to provide input about 1) what is needed to answer the management questions? and, 2) what information is needed to reduce uncertainties around the feasibility of a self-sustaining population in the Middle Fork? Marc pointed to language in the COP that questions if survival at key life stages can be improved and lays out some of the specific data that is needed to answer this question.

Agreement: **The Steering Team agreed** that the language from pgs.4-14 and 4-23 of the COP should be added to the Subbasin Plan summary to provide guidance to the RM&E Team. Additionally, they agreed that the summary needs to be fully cross-walked with the RPAs, COP, and current studies that are taking place to inform decisions.

→ **ACTION:** Marc (or Stephanie) will crosswalk the summary with the COP and Middle Fork passage and adult facility RPAs. Ian will work with Rich to add description of the current studies that will inform decisions. DS Consulting will add language from pgs.4-14 and 4-23 of the COP to the summary.

Karl Wiest, NPCC, pointed out that the RM&E Team has had difficulty agreeing on what research is needed in the Middle Fork and he did not think that the summary in its current draft would resolve the issues. Bernadette agreed, noting that the RM&E Team has largely been focusing on passage questions and that there are differences of opinions as to the priorities and information needs. Both thought including guidance from the COP and RPAs will help clarify priorities. Ian suggested that, if the Steering Team can agree on the objectives, then they can pass those on to the RM&E Team to discuss what studies and approach would best meet the agreed upon objectives. If there are still disagreements, the RM&E Team can elevate any unresolved issues to the Steering Team.

Dan reminded the group that they need to be clear about what the model can offer, noting that models are sometimes helpful, and nearly always wrong. He cautioned the group, noting that they do not want to end up in another model-war. The group agreed.

Agreement: The Steering Team agreed that the plan needs to be revised to address/clarify:

- The COP critical questions and other critical questions identified.

- The overarching goal is for a self-sustaining population, not just a sustained population. **The group agreed that more than 1:1 replacement is a goal.**
- Both the positive and negative aspects of reservoir rearing (i.e. life history diversity, size/reduced productivity issues)
- Adult pre-spawning mortality and potential to improve mortality (i.e. infrastructure, operational, using colder water and/or native stock, or improvements at the Dexter facility; efforts outside of the facility – see discussion below).
- Climate change and potential impacts.
- That a head-of-reservoir collector is not off of the table; while there are challenges with it at Dexter, the idea can still be explored, and lessons can be learned from the Shasta collector.

The group touched on uncertainties such as the carrying capacity of the reservoir, habitat capacity for adults upstream, and how habitat quality affects pre-spawn mortality. They discussed specific concerns around the high pre-spawning mortality at the Dexter facility. Bernadette questioned: what information do they need to gather that a new facility, as required in the RPA, wouldn't address? She noted that the current facility is not designed to handle the high numbers of fish and that the protocols are unrealistic due to the facility's constraints. Bernadette asked that the Corps clarify what questions they are trying to answer with the pre-spawning mortality study and how they will use the information. Ian noted that management decided not to move forward with a new facility at Dexter until there is more information on the feasibility of downstream passage. Once the feasibility of downstream passage is determined, they can resume working on the facility design, if appropriate. The group wondered if there is opportunity for increased survival with changes in the operations; for example: changing the handling, transport, over-crowding, etc. Lawrence Schwabe, Grand Ronde, noted that using colder water and local stock increases survival. It was noted that there has never been a concerted study to determine the cause of high injury or delays, and that pre-spawn mortality is also high at other better equipped facilities. The group discussed the need to measure any improvements that can be made short of a new facility. Marc suggested that the Managers should look into options to improve operations; for instance, if there is a resource need (e.g. more staff or hauling trucks), maybe the COE can help meet those needs. Joyce noted that the COE may be able to provide staff to help. Ian assured the group that the COE recognizes that the RPA calls for a new facility and, if the studies show that achieving replacement is feasible, the downstream passage and new facility projects will move forward. At this point, the COE management needs more information to help reduce their uncertainty.

Agreement: The Steering Team agreed that once the WATER teams have identified the work that is needed, they will keep an eye on and work to meet the timeline. Ian agreed to put together a timeline to clarify the short and long-term RM&E needs. This will include the time and duration of studies, what they are informing, and the decision points. All are committed to work being coordinated and completed at the right time to support management decisions.

→ **ACTION:** Ian will work with Rich and Emily to develop timelines to provide to the RM&E Team at their September meeting.

BPA Funding

Dan reported that, per the RM&E Teams' request, he inquired about potential funding opportunities from BPA. The request was to see if there is BPA funding through the Fish and Wildlife program to fund spawning surveys upstream of the dams. He shared that the program is currently 'full' and there is not funding for additional work. However, there is an ODFW component to the current funding and, if ODFW is interested in reallocating funds that they already have in order to cover other projects, it might

be doable. The group was interested in more information on funding opportunities from BPA; Dan agreed to arrange for someone to come to the October meeting with more information.

→ **ACTION:** Dan will arrange for a BPA representative to attend the October Steering Team meeting to discuss potential funding options.

WATER Workshop
Donna reminded the group that, in order to help build trust and collaboration, DSC and BPA suggested organizing a workshop that would bring WATER partners together to share information, ideas and strengthen working relationships. She noted that she received input that led her to realize she needs more information from WATER members in order to design a worthwhile workshop. Donna suggested that DS Consulting send out a survey to the WATER Teams to get a better idea of what topics would be useful and necessary to discuss in order to bring the region closer together. The survey will also ask for input on when the workshop should take place. The Steering Team agreed with this path forward.

→ **ACTION:** DS Consulting will send a survey to the WATER Teams to determine the content and timing for the regional workshop.

Next Steps
- DSC will work to schedule the next Managers' Forum meeting.
- Ian will develop a draft project design review timeline and provide it to the G4 and Steering Team.
- DSC and Ian will work together to develop a 'short and long-term research needs timeline' for the Middle Fork RME Plan.
- NMFS (Marc or Stephanie) will crosswalk the RPAs, COP and the draft plan.
- DSC will add language from the COP to the plan to clarify the direction of the RM&E needs for the RM&E Team.
- DSC will present the Steering Team's ideas for the elevation process to the RM&E Team and clarify with them any issues that need to be elevated at this time.
- DSC will send a Doodle poll to schedule the October Steering Team meeting.

The following items will be on the October agenda:
- Middle Fork RM&E Subbasin Plan
- RM&E elevations (if necessary), possibly including:
    - Long term data sets/data needs
    - Research for downstream passage at Green Peter project
- More on potential BPA fish and wildlife funding options

The next Steering Team meeting is scheduled for October 13th; **however, there were some who were not available to meet that day. DS Consulting will send a Doodle poll to determine the time and date of the next meeting.** Donna thanked the group for their good work, and with that the meeting was adjourned.

This summary is respectfully submitted by DS Consulting. Suggested edits are welcome and can be sent to Emily at emily@dsconsult.co.

Middle Fork Willamette Subbasin Research, Monitoring, and Evaluation Plan – Summary for WATER Discussion – 9-8-16

The Willamette Valley Biological Opinion notes that access to spawning and rearing habitat above dams restricts the Middle Fork Willamette population of spring Chinook salmon to a few miles of habitat below Dexter Dam that is unsuitable for spawning due to temperature and a loss of habitat complexity. RPA measure 4.12.2 calls for the action agencies to investigate the feasibility of providing downstream passage at Lookout Point (LOP) Dam. If found feasible agencies will construct downstream passage, with the goal of establishing a sustainable population of spring Chinook salmon using a trap and haul program.

The WATER Managers' Forum members have agreed to make a decision in 2019 on the feasibility of different passage measures for establishing a sustainable population of spring Chinook salmon.

Initial research and Configuration and Operation Plan analysis identified significant uncertainties of the feasibility of establishing sufficient survival of adults and juveniles to support a sustainable population. In particular, action agencies and fish managers have identified three aspects of survival that need to be considered in the 2019 decision:

- Survival of trapped and transported adults
- Survival of juveniles in Lookout Point Reservoir
- Adult return rates of fry transported around reservoirs

This information is critical to our understanding of whether passage in the Middle Fork would be effective and if so, how it should be implemented. The RM&E program will gather additional data to ensure managers have the information they need to support their decision process. These are the key information needs and the research that will support decision making.

Background: The action agencies and fisheries managers have prepared the MFW RM&E Plan to ensure the WATER Managers have the best available information for the FY19 biological check-in between NMFS and the action agencies. Three specific survival aspects will be studied under this plan and incorporated into Life Cycle Modeling for evaluating cohort replacement rate (CRR).

Purpose: The Middle Fork Willamette (MFW) RM&E Plan will identify information needs and research that address uncertainties regarding the biological feasibility of establishing a sustainable population of spring Chinook through a trap and transport program above Dexter Dam. We will evaluate the biological feasibility by estimating the CRR, and by comparing life-stage survival rates observed in the MFW to those from other river basins where sustainable populations exist or are likely feasible to establish.

1) **Survival of trapped and transported adults.**

Can survival of adults through spawning be increased through modifications to collection, handling, and outplanting protocols at the Dexter Adult Fish Collection Facility?

Prespawn mortality rates are currently moderate (>25%) to high (>50%) for adult Chinook trapped and transported from the Dexter Adult Fish Collection Facility. Keefer et al. (2010) concluded "unless juvenile survival is exceptionally high, the North Fork of the Middle Fork Willamette River population model results indicate that the high prespawn mortality rates we recorded in some years are likely to have a significant negative effect on reintroduction efforts and establishment of self-sustaining populations."

2) **Survival of juveniles in Lookout Point Reservoir.**

What is the survive rate for juvenile Chinook in LOP reservoir?

In-reservoir survival estimates for juvenile Chinook, in LOP and other Willamette reservoirs are not available. Although reservoirs may provide a significant opportunity for growth, mortality may be high due to predation or other factors. Most enter as very small fry when they are most vulnerable to predation.

This information will help us understand the baseline reservoir survival of fry, and if at-dam passage may be feasible or if head-of-reservoir collection and bypass should be pursued.

3) **Adult return rates from juveniles rearing within Lookout Point Reservoir and for fry transported around LOP and Dexter reservoirs.**

What are survival rates for juveniles that rear in the reservoir versus those that are transported around reservoirs?

If reservoir survival is determined to be too low and there are not reasonable options to improve in-reservoir survival, transport of juveniles (fry) around reservoirs may be considered. However fry released below dams, may have lower survival rates compared to those rearing in reservoirs before migrating downstream, due to differences in rearing habitat conditions, growth, migration timing and other factors. Analysis of adult returns will be used to inform the biological effects of transporting juvenile Chinook around reservoirs. For studies beginning in 2017, data on adult returns will not be available until 2021 (assuming age-4 returning adults).

Knowledge of the best area for juvenile rearing will help us understand where to investigate potential locations of juvenile collection for transport.

Based on the needs to best understand adult survival, juvenile survival and adult return rates, these are the specific studies (or types of studies) that will be used (if completed), completed (if currently ongoing) or implemented to support the 2019 check in: TBD by WATER RM&E Team

1.

2.

3.

4.

5.

VSP/SLAM Life Cycle Modeling & Climate Change:

Data collected from these studies of adult and juvenile survival will be modeled using the MFW spring Chinook SLAM Life-Cycle Model. The modeling effort will incorporate the latest estimates of life-stage specific survival, productivity, and capacity estimates under current and proposed passage conditions. It will incorporate alternative hydrologic and temperature conditions in order to evaluate population performance response (including CRR) to climate change assumptions and alternative passage conditions. Reservoir simulation models (ResSIM) will be used to develop the reservoir and hydrology conditions.

Data Analysis and Path Forward:

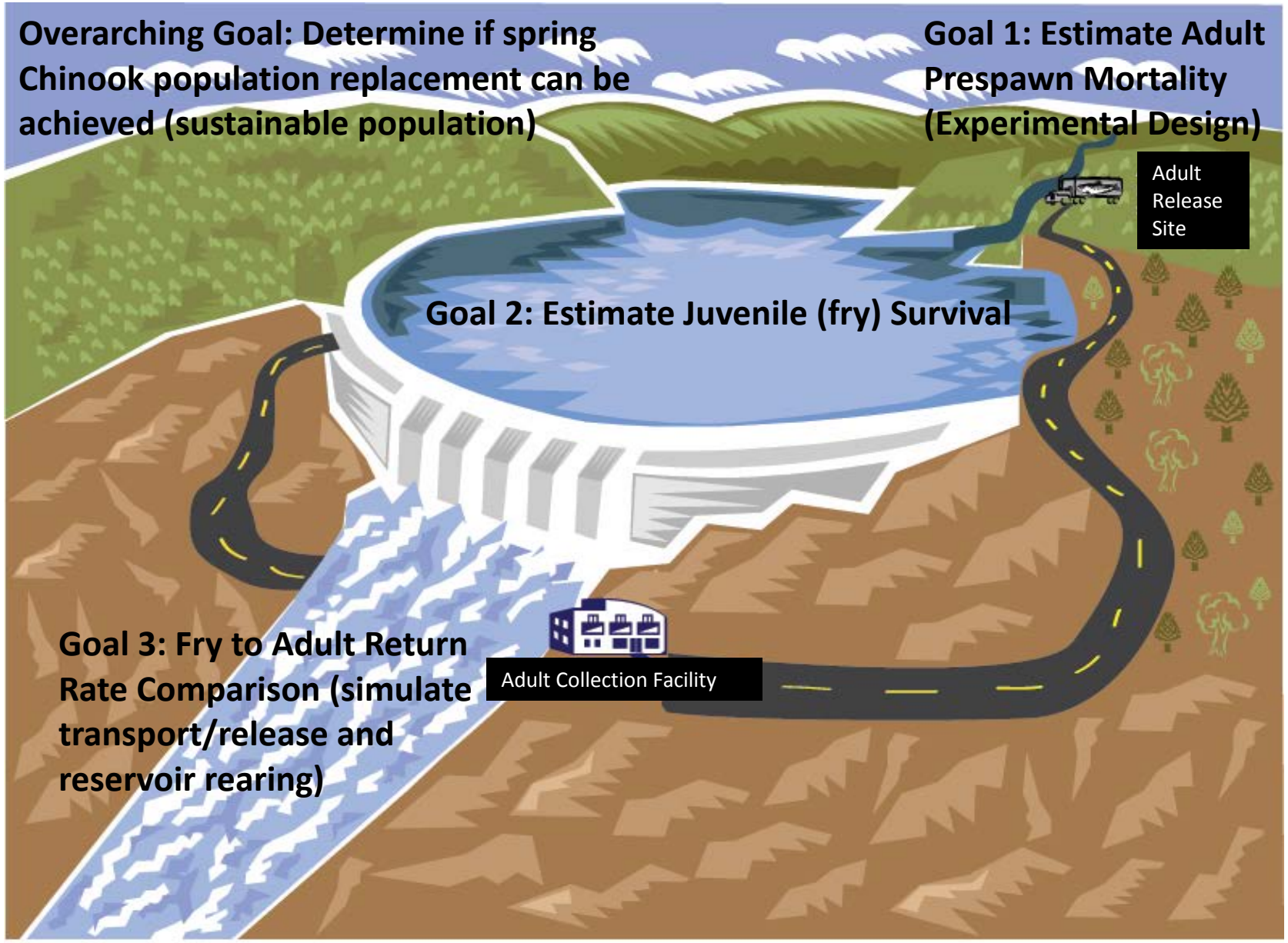
The FY19 biological check-in will be used to determine whether CRR of 1 or greater can be achieved when considering expected adult and juvenile survival rates associated with the current or alternative adult and juvenile passage system.

- If SLAM Life-Cycle modeling indicates adequate survival can be achieved, research performed after FY19 would then focus more closely on downstream passage collection alternatives at Lookout Point Dam. Some of these studies may occur before FY19 if funding is available (e.g. behavior of parr/smolt in Lookout Point Reservoir and forebay).
- If information indicates that population replacement is still uncertain;
    - Additional studies may be conducted to refine our understanding of what factors are limiting the ability of the population to achieve replacement.

      or,

    - Consider assessing another subbasin, such as the South Santiam upstream of Green Peter in-lieu of Lookout Point for achieving a similar population improvement.

If data/modeling indicates replacement may be achieved in the MF Willamette, an additional check-in would occur in FY21 to review completed fish behavior studies and the adult return rates of the fry released in FY17. Following the planned construction and operation of a downstream fish passage facility at Cougar Dam FY23-FY24 a decision to initiate designs for downstream passage at Lookout Point Dam will be made using the empirical data, modeling completed and results of the performance of the Cougar downstream passage facility.


Overarching Goal: Determine if spring Chinook population replacement can be achieved (sustainable population)
Goal 1: Estimate Adult Prespawn Mortality (Experimental Design)
Adult Release Site
Goal 2: Estimate Juvenile (fry) Survival
Goal 3: Fry to Adult Return Rate Comparison (simulate transport/release and reservoir rearing)
Adult Collection Facility